

Catalogue of our species of **OPHION**, **ANOMALON**, **PANISCUS** and **CAMPOPLEX**.

BY EDWARD NORTON.

The synopsis of genera here adopted is that proposed by Dr. Holmgren. The genera remaining undescribed are more numerous and contain many small species, which require a large collection of specimens to do them justice. Several species which seem to approach the genus *Absyrtus* are omitted for further examination.

Where not otherwise mentioned, the terebra is not longer than the width of the apical segment.

ARRANGEMENT OF GENERA. OPHIONIDÆ.

Section I. *First submarginal wing cell receiving two recurrent nerves.*

- A. *Antennæ on outer side incrassate, subclaviform.*
 B. *Antennæ filiform or setaceous, not incrassate toward the apex.*

OPHION Fab.**THYREODON** Brullé.Section II. *First submarginal wing cell receiving one recurrent discoidal nerve.*Division I. *Abdomen petiolate.*Phalanx I. *Marginal wing cell commonly lanceolate, areolate angle obtuse.*Sub-division I. *Posterior femora simple, unarmed.*

- A. *Metathorax with oval or oblong spiracle (in Absyrtus subrotund).*
 a. *Nails of the tarsi simple, not pectinate.*
 †. *Mandibles with two very unequal teeth at the apex. Recurrent discoidal nerve received in middle of first submarginal wing cell.*
 *) *First article of posterior tarsi about twice as long as the second.*

EXOCHILUM Wesm. Apical margin of clypeus truncate.**). *First article of posterior tarsi four times as long as second.***HETEROPELMA** Wesm. Apical margin of clypeus broadly rounded.

- ††. *Apex of clypeus in the middle acute angled or pointed. Apex of mandibles with two subequal teeth. Recurrent discoidal nerve received before the middle of submarginal wing cell.*

ANOMALON Grav. Eyes naked.b. *Nails of tarsi pectinate.**. *Scutellum somewhat convex, rounded at apex. Areolet of the wings present.*a. *Spiracle of first segment of abdomen situated before the middle.***PANISCUS** Grav.**ABSYRTUS** Holm. Head scarcely buccate. Scape of antennæ very obtusely cut off. Metathorax with subrotund spiracle.β. *Spiracle of first segment of abdomen situated between middle and apex.***CAMPOPLEX** Grav.**). *Scutellum depressed, subquadrate. Areolet of wings wanting.*

Charops Holm.

B. The remaining genera not yet examined.

OPHION Fab.

Abdomen compressed, petiolate; segment narrow, spiracle situated behind the middle, terebra short. Wings without areolet; feet slender, nails of tarsi pectinate.

A. *First submarginal cell including membranaceous spots.*

a. *With two spots.*

1. *Ophion purgatus.*

Ophion purgatus Say, Bost. Jour. 1, 239. ♀ ♂. Emmons, N. H. N. Y. Ag. V, 197.

Ophion lateralis St Farg. Hym. IV, 141.

New England, N. Y., Pa., Car. (St. Farg.), Fla., Ind. (Say), Ill.

2. *Ophion cubensis*, n. spec. ♀ Length 0.68. Br. wings, 1.04 inch.

Color yellow rufous, with yellow spots, and apex of abdomen rufous. Antennæ slender, toward the end blackish. Head yellow, a spot within ocelli and a short longitudinal line below antennæ piceous; eyes more contracted below than in *Ophion purgatus*; the mesothorax, except the edges and two pale longitudinal lines, all the incisures of the thorax, the pectus and the three apical segments of the abdomen piceous; several spots on pleura, metathorax and the third and fourth segments of abdomen yellow; inner spines of tibiæ much stronger than exterior; wings hyaline; stigma and costa to tip of wings yellow; inner marginal nervure enlarged from stigma to recurrent nervure; the bulla on second submarginal cross nervure small and slightly removed from end of nervure; inner spot in submarginal cell triangular, incurved outwardly, opposite to which is the second smaller crescent-shaped spot.

Cuba.

Three specimens examined. (Collection of Baron Osten Sacken.)

b. *With one spot.*

3. *Ophion glabratus.*

Ophion glabratus Say, Bost. Jour. 1, 239. Emmons, N. H. N. Y. Ag. V, 196.

Indiana (Say).

Not seen.

B. *First submarginal cell including no membranaceous spots.*

*) *Inner radial wing nerve straightly or evenly curved.*

4. *Ophion bilineatus.*

Ophion bilineatus Say, Macl. Lyc. p. 75. Bost. Jour. 1, 248. ♀ ♂.

N. England, N. Y., Md., Ia. (Say), L. Sup., L. Winnepeg (Camb. Mus.).

5. *Ophion bifoveolatus.*

Ophion bifoveolatus Brullé, Hym. IV, 139. ♀ ♂.

N. Y., Md., Ill., Red River, Ark. (Smith. Inst.).

The description of this will apply as well in some cases to the *bilineatus* of Say. But the following points of difference may be noted. The antennæ not quite as long, eyes smaller and more widely separated, cheeks and back of head much more prominent. The carina crosses the metathorax of *bilineatus* transversely in an unbroken curve, while in this it forms quite a crescent shaped curve in the middle and is sometimes indis-

tinged or entirely wanting. The colors of the body vary, being sometimes pitchy brown with the thoracic lines indistinct, while sometimes they are almost white and much more distinct than in any specimens of *bilineatus*, and the body varied with yellow spots. The costal nerves are very black, with no yellow except within the stigma. This is not so common as *bilineatus*.

(**). *Inner radial wing nerve incrassate toward the stigma and recurved.*

6. *Ophion macrurum*.

Ichneumon macrurum Linn. Mant. 540.

Ophion macrurum Drury, Ex. Ent. I, 92, pl. 43, 5. Emmons, N. H. N. Y. Ag. V. p. 196, pl. 27, fig. 5.

Ophion cecropia Harris, Catalogue.

Ophion rugosus Brullé, Hym. IV, 138.

N. England, N. Y., Pa., Ill., N. Orleans.

Parasite on *Attacus Cecropia* and *Polyphemus*. The largest specimens are about 1.40 inch in length and 2.24 inches in br. wings. They vary much in size and somewhat in form of large submarginal cell, in the upper part of which all have a large very clear space.

THYREODON Brullé.

Clypeus enlarged and advanced in the middle in form of a tooth; mandibles wide; second article of maxillary palpi enlarged; metathorax rounded at summit.

7. *Thyreodon morio*.

Ichneumon morio Fab. Ent. Syst. II, 180, 194 (1775). Spec. Ins. I, 436 (1781). Mant. Ins. I, 269 (1787). Ent. Syst. Sup. 237, 8 (1792). Oliv. Encyc. Méth. Ins. 7, 196, 161 (1792).

Ophion morio Fab. Syst. Piez. 132, 9 (1804).

Ophion atricolor Oliv. Encyc. Méth. Ins. 8, 511 (1811).

Thyreodon morio Brullé, Hym. IV, 152 (1846).

N. Eng., N. Y., Pa., Ill., Car. (St. Farg.), Am. Merid. (Fab.).

The apical joints of the antennæ are black.

Fabricius in his last notice of this insect (1804) calls it an *Ophion*. Olivier in 1811 seems to overlook his former description of it under the name of *Ich. morio* and redescribes it as *Ophion atricolor*, and Brullé in his turn has disregarded Olivier's description and refers back to Fabricius.

EXOCHILUM Wesmæl.

8. *Exochilum nigrovarium*.

Anomalon nigrovarium Brullé, Hym. IV, 172 ♀.

Two specimens. Conn. N. Am. (St. Farg.)

9. *Exochilum fuscipennis*, n. sp. ♀. Length 1.10 in. Br. wings 1.44 in.

Black, with rufous marks, wings smoky yellow. Antennæ reddish, several of

the basal joints black at their base, yellow before; vertex roughened, punctured behind the ocelli; a space before antennæ, a line on inner and outer orbits and a dot above, clypeus and front of labrum, upper side of mandibles and the palpi yellow; scutel black, post-scutel crenate, basin of metathorax sharply defined, with coarse punctures among the rougher carinæ; tegulæ, base of wings and legs yellowish; coxæ and apical half of posterior femora and tibiæ black; 1st, 2nd, 3rd and a spot above at base of 4th segments of abdomen rufous (except a black line on summit of 2nd and the edge of venter of 2nd and 3rd segments); the joints of 2nd and 3rd segments beneath and a spot at base of ovipositor, white; wings smoky yellow, darkest toward base, base of stigma yellow.

One specimen. Washington, D. C. (Baron Osten Sacken.)

10. *Exochilum mundus*.

Ophion mundus Say, Bost. Jour. 1, 228 ♂. Emmons, N. H. N. Y. Ag. V, 196.

Anomalon flavipes Brullé, Hym. IV, 170 ♀ ♂.

N. Eng., N. Y., Pa., Ia., Lake Sup., Mex. (St. Farg.).

11. *Exochilum tenuipes*, n. sp. ♀. Length 1.04 in. Br. wings 1.32 in.

Black, tarsi in part rufous. Antennæ yellow, four or five basal joints black; joints as long as wide; vertex roughened, face about and beneath antennæ punctured; a narrow line beneath antennæ and the inner and outer side of orbits yellow; mandibles and palpi piecous; scutellum rounded, prominent, not truncate behind; edges of metathoracic basin strongly defined, scalloped, basin transversely carinate, with an incomplete longitudinal fossula; tegulæ and second segment of abdomen somewhat piecous; legs slender, the two anterior pair rufous before; base of posterior femora, tibiæ and first joint of tarsi piecous; tarsi not much thickened; first joint nearly three times as long as second; wings black, semi-opaque, stigma dark.

Two specimens. Conn., and Mass. (S. H. Scudder).

HETEROPELMA Wesmæl.

12. *Heteropelma flavicorne*.

Anomalon flavicorne Brullé, Hym. IV, 171 ♀ ♂.

Anomalon flavicornis Say, West. Quar. Rep. 11, 1, 74!!

Conn., Penn.

I am not sure that Say's species is the same with the above.

ANOMALON Grav.

Section I. Antennæ $\frac{1}{2}$ — $\frac{3}{4}$ the length of body.

A. *Recurrent discoidal nervure broken at or a little below the middle.*

B. *Recurrent discoidal nervure broken above the middle.*

a. *Discoidal cell much contracted at base.*

13. *Anomalon relictus*. Length 1.08 in. Br. wings 1.16 in.

Ophion relictus Fab. Syst. Piez. 133, 12. Ent. Syst. Suppl. 236, 5 ♀ ♂.

♀. Color rufous. Head very wide, eyes but little contracted below; face below antennæ, cheeks and scutel yellow; a spot above ocelli, front of mesothorax, a

band at summit of metathorax encircling body, base of four anterior coxæ, posterior coxæ and legs rufous; tips of posterior tibiæ black, the tarsi yellow; wings smoky yellow, deepest at base, slightly violaceous at tip, stigma rufous.

♂. The abdomen of the male is mostly rufous.

N. Y., Mass. (Harris Coll.), N. Am. (Fab.).

The head is larger than in any other species that I have seen, the metathoracic basin not defined at sides. This and all the following species of *Anomalon* have a black spot at base of first joint of abdomen beneath, as well as a black line on second segment above.

14. *Anomalon analis*.

Ophion analis Say, Mael. Lyc. 1, 76. ♀.

Ind. (Say), Mass. (S. H. Scudder), N. Y., Kansas.

This somewhat resembles *relictus*, but is smaller (L. 0.68. Br. 0.72 in.), the antennæ are dark and the eyes slightly contracted below, the head smaller, the metathoracic spiracles oval and the edges of the basin somewhat defined.

15. *Anomalon laterale*

Anomalon laterale Brullé, Hym. IV, 175. ♀ ♂.

N. York.

The lower half of metathoracic basin is concave and transversely rugose, with the sides sharply defined.

The male resembles the female.

b. *Discoidal cell not contracted at base.*

16. *Anomalon hyaline*, n. sp. Length 0.82 in. Br. wings 1.00 in.

♀. Rufous, with clear wings. Antennæ piceous, basal joints yellow, 4th and 5th joints blackish; head yellow, eyes reddish, the summit and back of head black, a yellow orbital dot on each side of ocelli, inner edge of mandibles piceous, front and base of mesothorax, apex of metathorax, pectus, apical half of first segment and the second segment of tergum black, valves of terebra yellow, clavate; anterior legs, basal half of posterior tibiæ and the tarsi yellow; posterior coxæ rufous beneath and black above; trochanters, apex of femora and tibiæ black; tegule yellow, wings hyaline, bullæ (or nerve fractures) small.

One specimen. Farmington, Conn.

The metathoracic spiracle is oval, basin distinct; sides rounded, transversely rugose.

17. *Anomalon nigro-rufus*, n. sp. Length 0.82 in. Br. wings 0.92 in.

♀. Black, abdomen rufous. Antennæ little more than half the length of body, dark piceous, at base beneath yellow, separated (as in *Thyreodon*) with the slender ridge below ocelli elevated into a thin prominent spine between; vertex coriaceous; face below antennæ, a dot each side of ocelli and the cheeks yellow; upper half and back of head, thorax and scutellum black; tegulæ and ridge from base of inferior wings to intermediate legs luteous; lower half of metathorax and abdomen rufous; the first and five-sixths of second segment of tergum black; apical segments of

tergum blackish; terebra styles yellowish; the four anterior legs yellow-rufous; posterior pair rufous, the coxæ and trochanters above, tips of femora and apical half of tibiæ black; tarsi yellow except base of first article; wings smoky hyaline, stigma reddish in middle.

One specimen. N. Y.

The antennæ are shorter than those of *hyaline*, and the eyes more widely separated, basin of metathorax rugose, largely concave, sides irregularly defined.

Section II. Antennæ less than $\frac{1}{2}$ the length of body.

Recurrent nervure broken above the middle, discoidal cell not contracted at base, metathoracic basin not concave, antennæ 35 to 37 jointed.

18. *Anomalon curtus*, n. sp. ♂. Length 0.76 in. Br. wings 0.92 in.

♂. Black, abdomen rufous, spotted with yellow and black. Antennæ piceous, black at tip and base above (yellow beneath), vertex with confluent punctures, face below antennæ and a narrow line back of eyes, mandibles and palpi yellow; scutel black, prominent, rounded, coarsely punctured, two carinæ from apex to middle of metathorax; 1st, 2nd and part of 3rd and 4th segments of abdomen rufous; a black line on summit of 2nd, the sides of 3rd and 4th and the remaining segments black, spotted with yellow, the four anterior legs yellow; posterior coxæ, spot on trochanters, femora and apex of tibiæ black; a spot on tip of coxæ beneath, trochanters, base of tibiæ and tarsi yellow, tarsi blackish above. Wings hyaline, tegulæ and basal half of costa yellowish, stigma piceous.

Three specimens. Maine (Mr. Packard), Del. (Ent. Soc. Phil.).

19. *Anomalon ambiguus*, n. sp. ♀. Length 0.72 in. Br. wings 0.80 in.

♀. Black, abdomen rufous. Antennæ short, pale piceous, palest at base, yellow beneath; vertex coriaceous; orbits, face below antennæ, a spot on mandibles and palpi, tegulæ and scutel yellow; ridge between pleura and metathorax rufous; a black line on 2nd segment of abdomen above and the apical segments blackish; legs ferruginous, the two anterior pair palest; posterior coxæ and apical half of tibiæ black; tips of tarsi blackish above; wings smoky yellowish, stigma rufous.

One specimen. Mass. (S. H. Scudder).

20. *Anomalon semi-rufus*, n. sp. ♀. Length 0.72 in. Br. wings 0.84 in.

♀. Ferruginous and black. Antennæ hardly longer than thorax, 3rd article as long as 4th and 5th, color piceous, darkest toward tip, basal joints ferruginous; head ferruginous, vertex coarsely pitted, eyes approaching at bottom, face below antennæ yellow; edge of clypeus, labrum and mandibles ferruginous, hairy; scutel yellow, the sides of mesothorax, a dot behind scutel, the metathorax above, a stripe curving from tegulæ to base of pleura and the abdomen ferruginous; remainder of thorax, a line above second segment and on the sides of five apical segments black; terebra valves, four anterior legs, posterior trochanters and tarsi yellow; all the coxæ, intermediate femora above, posterior femora and tibiæ ferruginous, posterior trochanters in part and apex of tibiæ black; femora and tips of tarsi above blackish; wings faintly smoky, tegulæ yellowish, stigma and costa ferruginous.

One specimen. Albany, N. Y.

21. *Anomalon ferrugineus*, n. sp. ♀. Length 0.60 in. Br. wings 0.72 in.

♀. Ferruginous. Antennæ hardly as long as thorax, basal article palest, yellowish beneath, 3rd as long as 4th and 5th, remaining articles wider than long; vertex coarsely pitted, ocelli black; face below antennæ and a large spot on mandibles yellow, tips of mandibles black; base of costa, scutel, some irregular spots on sides of abdomen and the terebra valves yellow; a black line above 2nd segment; legs color of body, posterior pair darkest; anterior trochanters, tibiæ and tarsi, tips of posterior trochanters, femora and base of first article of tarsi yellow; wings yellowish smoky, stigma rufous.

Two specimens. Chicago, Ill. (P. R. Uhler).

The metathorax is coarsely pitted.

22. *Anomalon nigratum*, n. sp. ♂. Length 0.48 in. Br. wings 0.56 in.

♂. Black, abdomen partly rufous. Antennæ black, piceous beneath and yellow at base, a little longer than thorax, articles longer than wide; vertex rough, somewhat confluent punctured; a narrow reddish orbital line behind; face at the side of and beneath antennæ, a spot on mandibles and the palpi yellow, scutel black; metathorax flattened behind, obscurely transversely rugose, sides of basin distinct; abdomen rufous, base of 1st, a line on 2nd above, the sides of the three following and the apical segments black; tips of four anterior coxæ and the legs (except a black line on femora above), posterior trochanters, base of tibiæ and tarsi yellow; all the coxæ, the posterior femora and apical half of tibiæ black, posterior tarsi above and apical joints of all the tarsi reddish, wings smoky hyaline, costa pale, stigma piceous.

One specimen. Mass. (Harris Coll.).

Section III. Antennæ as long or nearly as long as body, very slender, abdomen slender, segments compressed toward apex.

a. *Discoidal arca not contracted at base.*

23. *Anomalon luteo-pectus*, n. sp. ♂. Length 0.60 in. Br. wings 0.74 in.

♂. Black and rufous with yellow pectus. Antennæ longer than body; ferruginous, the sides of 1st article, the 2nd and 4th above and apex black; the basal article above and below and the 2nd and 4th beneath yellow; head yellow; ocelli ruby, a black spot on summit (enclosing ocelli, with a yellow dot on each side) covering back of head to neck; clypeus and mandibles with pale hair; mesothorax, apex of metathorax and part of pleura black; mesothorax distinctly trilobate, confluent punctured around the edges and between the lobes; tegulæ, scutel, front of pleura and pectus yellow; prothorax and neck, space below scutel, base of metathorax and abdomen pale ferruginous; line above 2nd segment and apex of abdomen black; four anterior legs, posterior coxæ, trochanters and tarsi yellow; a spot on posterior coxæ and trochanters above and the apical half of tibiæ black; femora and base of tibiæ rufous; wings hyaline, stigma pale.

One specimen. Farmington, Ct.

This and the succeeding species have the metathorax produced as in Sec I, with a shallow suture and interlacing carinæ over the whole surface. No black spot at base of 1st segment beneath.

b. *Discoidal area contracted at base.*

24. *Anomalon prismaticus*, n. sp. ♂ ♀. Length 0.48. in. Breadth wings 0.56. in.

♀. Honey yellow, with black pectus. Antennæ nearly as long as body, ferruginous; 2nd article above, base of 4th and apical articles blackish, basal articles yellow beneath; a spot enclosing ocelli and touching antennæ and a spot on back of head about the face, black; face below antennæ and the cheeks yellow; a spot on prominent lobe of mesothorax, sutures about scutel, the pectus and two apical segments of abdomen above, black; the other segments darkest above; the four anterior coxæ and trochanters, anterior pair of legs and four posterior tarsi at base yellow; remainder of legs rufous, posterior darkest; apical half of posterior tibiae dark rufous; wings hyaline, with a beautiful prismatic reflection; nervures black.

♂. The vertical spot of male is larger; the lower half of pleura, summit and sides of metathorax black.

Four specimens. Mass. (S. H. Scudder), and Ct. June and July.

25. *Anomalon metallicus*, n. sp. ♀. Length 0.34 in. Br. wings 0.48 in.

♀. Honey yellow, pectus black. Antennæ about $\frac{3}{4}$ the length of body, piceous; most of 4th, the extreme base of each succeeding article and the apex blackish, head yellow, smooth, a distinct black spot enclosing ocelli and extending over back of head; a spot in front and rear of mesothorax, a triangular spot on pleura, the pectus and three apical segments of abdomen above, black; venter, four anterior legs and posterior tarsi (in part) varying from yellow to pale rufous; four anterior coxæ and trochanters white, posterior legs rufous, trochanters and tips of tibiae blackish; wings hyaline, iridescent, nervures piceous.

One specimen. Mass. (S. H. Scudder).

PANISCUS Grav.

Scape of antennæ subovate, apex very obliquely truncated. Areolet triangular externally, nervure broken.

26. *Paniscus geminatus*.

Ophion geminatus, Say, Macl. Lyc. 1, 76.

N. Eng., N. Y., N. J., Pa., Del., Md., Va., Ill., Can., Cal.

There appears to be two distinct sizes of this, of which the largest averages about 0.90 in length, 1.18 br. wings and the smallest, length 0.48, br. wings 0.72 in., but I have not found sufficient difference between them to warrant calling them different species.

27. *Paniscus chloris*.

Ophion chloris Oliv. Encyc. Méthod. Ins. 8, p. 509 (1811).

"*Ophion pallidè, testaceus, immaculatus, abdomine falcato, subtus dentato.*"

Hab. N. Am.

There is very little doubt that this is the *O. geminatus* of Say, from which it differs only in having two or three "dentelures" beneath the abdomen. Most of my specimens have thin transparent projections beneath some of the segments, but they can hardly be called dentate or inclining to it.

CAMPOPLEX Grav.

Areolet of the wings complete (in all the species examined rhomboidal, the lower angle obtuse).

Metathorax in the middle longitudinally concave or subsulcate.

28. **Campoplex vitticollis**, Harris's Cat. ♀. Length 0.60 in. Br. wings 0.80 in.

♀. Ferruginous, with a black stripe on thorax. Antennæ moderate, ferruginous at tip and base, eyes scarcely contracted below, head black; mandibles, palpi and tegulæ yellow; tips of mandibles dark; face and thorax covered with silvery hair; a black line, interrupted by scutel, from the head to base of metathorax; scutel rufous at apex; a line on 2nd segment of abdomen, valves of terebra and the pectus black; anterior legs, tips of intermediate femora and legs below and base of posterior tibiæ yellow; a line on anterior femora above, intermediate coxæ, trochanters and femora, posterior coxæ, trochanters, base of femora beneath and tarsi black; four posterior coxæ above, femora and apex of tibiæ ferruginous; wings yellow hyaline, nervures dark.

Four specimens. Ct., and Md. (P. R. Uhler).

In this and all the succeeding species the thorax is closely punctured, except beneath the wings, where there is a small space more or less smooth or striate. The punctures are most coarse on the metathorax, sometimes appearing more like granulations than pits. The punctuation of the pleura is rather sparse and the color generally dull. In this species it is shining.

29. **Campoplex villosus**, n. sp. ♀ ♂. Length 0.64 in. Br. wings 0.76 in.

♀ ♂. Black, with the metathorax and abdomen ferruginous. Antennæ long, piceous beneath, produced to a slender tip; a thin longitudinal ridge between ocelli and antennæ; head and thorax covered with silvery hair, longest on face and metathorax; a spot on mandibles, palpi and tegulæ yellow; a triangle below inferior wings, metathorax, except at summit, posterior coxæ above and 1st segment of abdomen ruby-red; remainder of abdomen ferruginous, a black line on second segment; a spot on anterior coxæ, the four anterior legs and posterior tibiæ in the middle yellow; a line on anterior femora above, intermediate coxæ and most part of femora and posterior legs black; basin of metathorax transversely striate, the angles distinct, the ridge between them and the postscutel forming a carina, angulate or bent, above which are smooth shining spaces; wings hyaline.

Four specimens. Albany, N. Y., and Ct.

The pleura is covered with very fine punctures and shines like the abdomen. The carinæ on the summit of the metathorax appear in most species of *Campoplex*.

30. **Campoplex argenteus**, n. sp. ♀. Length 0.64 in. Br. wings 0.94 in.

♀. Black, with abdomen rufous, except at base. Antennæ a little more than half the length of body, flagellum dark piceous, basal joint yellow beneath (in some cases piceous or black), lower half of face and most of thorax covered with silvery white hair; basin above antennæ distinct, not rough, face below antennæ coarsely punctured; mandibles (except tips), palpi and tegulæ yellow; basin of metathorax transversely wrinkled below, striate above and shining at summit;

spiracle long; 1st segment of abdomen unusually globose toward apex and with the 2nd above and valves of terebra black; remaining segments rufous, more or less mottled with black; 2nd segment yellow or yellow rufous beneath; posterior tibiæ and spines and the four anterior legs yellow, except a line on anterior femora before, the intermediate coxæ and two-thirds of femora, which, with the posterior legs are black; wings smoky hyaline.

Three specimens. N. Y., Ct.

The abdomen of the females toward the apex is wide, flattened, as in *Ophion*, and truncated obliquely at end. The spaces above the carinæ on metathorax are punctured so as to appear striate in some lights and the summit of the angle enclosed by the carinæ is shining rugose.

31. *Campoplex diversus*, n. sp. ♀ ♂. Length 0.50-54. Br. wings 0.72-76 in.

♀. Black, abdomen partly rufous. Resembles *C. argenteus*, from which it differs as follows:—Antennæ piceous only toward tip, face somewhat contracted below antennæ; metathorax so punctured as to appear granulate, and covered with white hair, except in basin; basin transversely wrinkled and striate to summit, not shining; first segment and upper part of second nearly to its apex black; second segment yellowish beneath; remainder of abdomen rufous, darkest toward end, and not widely flattened nor truncate as in *C. argenteus*; first segment not more globular at apex than in other species; legs as in *C. argenteus*, with more of black at base, anterior coxæ black; posterior tarsi blackish.

♂. The male has the two apical segments of the abdomen black and the four anterior legs wholly or mostly yellow. The antennæ are a little longer than those of the female.

Four specimens. Mass. (Scudder), Ct.

One couple taken pairing in June. This male has a yellow spot on the front of first article of antennæ. One specimen has the first segment of the abdomen and the posterior tibiæ almost entirely rufous.

This may be considered a variety of *C. argenteus*.

32. *Campoplex glaucus*, n. sp. ♀. Length 0.44 in. Br. wings 0.56 in.

♀. Black, abdomen rufous. Antennæ moderate, basin of vertex apparently coriaceous; a large reddish spot on mandibles; palpi pale; head and thorax covered with short whitish hair, not silvery; tegulæ yellowish; spiracle of metathorax ovate; basal half of first segment, a spot on second segment above and valves of terebra black; the four anterior legs with yellow tibiæ and tarsi, reddish toward base; posterior legs ferruginous; all the coxæ, trochanters, posterior tibiæ and tarsi above dark piceous, shading into ferruginous; wings hyaline.

One specimen. Farmington, Ct.

33. *Campoplex xanthogaster* Brullé, Hym. IV, 159. N. Am.

♀. "Black, with the abdomen and two posterior feet ferruginous; with the four anterior feet, the mouth and base of the antennæ yellow."

Not seen. From the description it differs from the preceeding in the markings of the abdomen, having the first segment yellow in its narrow

portion and the remainder red, with the back brown; the back of the second segment entirely and the base only of the third black; the four anterior trochanters yellow and the posterior pair ferruginous. I have an injured specimen to which this description will apply closely but not decisively.

34. *Campoplex assitus*, n. sp. ♀. Length 0.40 in. Br. wings 0.52 in.

♀. Black, with abdomen in part rufous. Antennæ piceous, long and slender, very finely produced toward the tip; face narrowed below the antennæ; head and sides of thorax with sparse white hair; on the face and pleura the punctures seem to run into striæ; the thorax above is finely punctured; mandibles piceous at tip; basin of metathorax with transverse striæ; spiracles on the sides of segments very prominent, basal and second segments of abdomen except the tip above black; apical segments with black above, second segment with fine cross striæ; legs black, anterior pair yellow beneath, below the coxæ: intermediate pair with a spot on tips of femora above and the tibiæ yellow; all the tarsi with whitish ends; wings faintly clouded.

One specimen. Farmington, Ct.

35. *Campoplex dissitus*, n. sp. Length 0.40 in. Br. wings 0.52 in.

♀. Black, abdomen mostly rufous. Antennæ moderate, dark piceous at tip, second joint almost ruby-red; face scarcely narrowed below antennæ, clothed with silvery hair; the body not finely punctured and hardly shining; basin of metathorax distinct; first and upper basal half of second segment of abdomen black; remainder of second above and part of third brown, remainder of abdomen red-ferruginous; spiracles indistinct; the ground color of the legs black; the four anterior femora yellowish toward the tips, the anterior tibiæ and tarsi yellow, the intermediate tibiæ and tarsi darker above than beneath; wings faintly clouded.

One specimen. Lake Saskatchewan (Camb. Museum).

36. *Campoplex alius*, n. sp. Length 0.38 in. Br. wings 0.54 in.

♀. Black, with red and black abdomen and honey yellow legs. Antennæ more than half the length of body, equal in size nearly to end, piceous, with basal joint palest. Face but little narrowed, apparently coriaceous; fine short silvery hair on face and thorax; mandibles and palpi honey yellow; pleura wrinkled and striate above, dull, with fine sparse punctures below; metathoracic basin deep, with transverse wrinkles; the first, second (except at tip) and the final segments of abdomen black; the tip of second and the third and fourth segments ferruginous; all the coxæ and the posterior trochanters black; posterior tibiæ at base and apex and the tarsi of four posterior legs blackish, remainder of legs honey yellow. Wings hyaline, nervures and tegulæ piceous.

One specimen. Mass. (S. H. Scudder).

37. *Campoplex genuinus*, n. sp. ♀ ♂. Length 0.36 in. Br. wings 0.52 in.

♀. Black, with honey yellow legs. Antennæ hardly half the length of body; the whole insect sericeous with short, fine white hair; clypeus protruded, rounded, palpi yellowish; face scarcely narrowed below antennæ; ocelli large, ruby colored, the smooth space beneath wings with fine curved striæ; spiracle very small,

oval, spiracle on first segment of abdomen near the apex, on the expansion of the petiole; seventh segment wider than the sixth, making the abdomen appear truncate; legs honey yellow, coxæ and trochanters black, apical joints of tarsi blackish. Wing hyaline, lower angle of radial cell less obtuse than usual.

♂. White hair upon the face shorter than female; clypeus retracted, rounded in middle; segments of abdomen hardly flattened.

Twenty five specimens. Farmington, Conn.

The clypeus in this species has a sinus on each side of the advanced naus, therein differing from all the other species which have it evenly and moderately rounded.

I present this description of so many new species in this genus with hesitation and have endeavored to condense the number of species, but the variations in form are quite as great as in color, especially in the antennæ and abdomen, to which latter my descriptions hardly do justice.

I should add that the term rufous as used here is applied to the color termed ferruginous by Brullé which seems capable of latitude of interpretation.

LASIOPTERA reared from a gall on the golden-rod.

BY BARON R. OSTEN SACKEN.

I am indebted to Mr. Edw. Norton for the communication of several specimens of this *Lasioptera*, reared by him in a box which contained a number of galls on the stalks of *Solidago*, all resembling more or less the common gall of *Trypeta Solidaginis* Fitch. By a careful examination of these galls and their contents I attempted to discover from which of them the *Lasioptera* had escaped. Although this attempt remained fruitless, and I did not find, as I had expected, any exuviae of the pupa of the midge, I will nevertheless communicate some facts, which resulted from my examination, and may be useful for future observers. I soon perceived that the galls could be separated into three groups. The first group was formed of the fully developed galls of the *T. solidaginis*, with the pupa-shell on the inside and the round hole, through which the fly had escaped, on the outside. The walls of the cavity of some of these galls showed a marked difference from the smooth and whitish or yellow walls of the normal specimens, being brown or blackish and bearing traces of the burrowing of some other insect than the larva of *Trypeta*, which, however, had not prevented the latter from completing its transformation, as